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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,564	06/29/2001	Juan J. Silva	4740-005	7967
24112	7590	08/18/2005	EXAMINER	
COATS & BENNETT, PLLC			JUNG, MIN	
P O BOX 5			ART UNIT	
RALEIGH, NC 27602			PAPER NUMBER	
			2663	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/896,564

**Applicant(s)**

SILVA ET AL.

**Examiner**

Min Jung

**Art Unit**

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) 43-57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 15, 16, 25, 29-31 and 42 is/are rejected.
- 7) ☒ Claim(s) 4-10, 12-14, 17-24, 26-28 and 32-41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 3, 4, 31, and 32 are objected to because of the following informalities: In claim 3, line 4, claim 4, line 2, claim 31, line 5, and claim 32, line 3, a reference is made to "the selected the base station". It seems that the phrase should be changed to ----the selected base station----- for clarity. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3, 15, 16, 30, 31, and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Rezaiifar et al., US 6,597,705 (Rezaiifar).

Rezaiifar discloses a method and apparatus for distributed optimal reverse link scheduling of resources, such as rate and power in a wireless communication system.

Regarding claims 1, 16, and 30, Rezaiifar teaches defining a set of base stations in the wireless communication network (base stations 106A, 106B, Fig. 1); defining a set of subscriber units (subscriber units 102, 108, Fig. 1); defining a set of subscriber types, each subscriber type being associated with an application and a desired data rate (mobile stations carrying voice traffic, data traffic, video traffic, etc. and having different rate requirements, col. 5, lines 33-43, and col. 6, lines 51-67); assigning a subscriber type to each of the subscriber unit for each subscriber units (Type assignment is inherent in Rezaiifar because different types of services are described in association with the mobile units, wherein the different services are assigned to the subscriber units before the subscriber units are deployed); for each subscriber unit, determining the reverse link transmit power needed to acquire service with one or more selected base stations at the desired peak data rate (col. 11, line 58 – col. 12, line 27); if the reverse link transmit power needed to acquire service with the selected base station at the desired peak data rate is greater than the maximum transmit power of the subscriber unit, determining whether the subscriber unit has sufficient power to acquire service with the selected base station at a reduced peak data rate (col. 12, lines 44).

Regarding claim 2, Rezaiifar teaches that the communication link is a reverse link (See abstract).

Regarding claims 3 and 31, Rezaiifar teaches determining the reverse link transmit power required to establish the reverse link channel at the desired peak data

rate with the selected base station (the base station computes a quantized power vector  $P_Q$  corresponding to the quantized rate vector  $R_Q$ , see col.12, lines 3-19); and determining if the required reverse link transmit power is greater than an available transmit power for the subscriber unit (the base station determines whether the computed quantized power and rate vectors  $P_Q$  and  $R_Q$  provide a feasible solution, col. 12, lines 20-22).

Regarding claims 15 and 42, Rezaiifar teaches comparing the reduced data rate to a minimum data rate for the application associated with the subscriber unit to determine whether the reduced data rate is acceptable for the application. See col. 12, lines 30-36.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11, 25, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar.

Rezaiifar fails to specifically teach the rate control scheme associated with a forward link channel. Rezaiifar, however, teaches the rate control scheme as claimed, except it is done on a reverse link channel. Nonetheless, Rezaiifar teaches a power control scheme on a forward link channel. See col. 5, line 10 – col. 6, line 5. With the

teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to apply the rate control scheme on the forward link in order to control the data transmission rate for the transmission from the base station to the mobile stations since power level and data rate are closely related communication parameters, and applying the rate control on the forward link as well as on the reverse link would provide higher capability on the communication system.

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***Allowable Subject Matter***

6. Claims 4-10, 12-14, 17-24, 26-28, 32-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Umeda et al. PG Pub., The Chen patent, the Jiang et al. patent, the Chung et al. patent, the Kong et al. patent, and the Love et al. patent, are cited for further references.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Min Jung whose telephone number is 571-272-3127. The examiner can normally be reached on Monday, Thursday, Friday 7:30 - 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ  
August 17, 2005

A handwritten signature in black ink, appearing to read "Min Jung", written in a cursive style.

Min Jung  
Primary Examiner